AMENDMENTS TO THE SPECIFICATION

Applicant amends paragraph [0018] on page 5 to read:

[0018] Figure 5 is a diagram illustrating the reference frames used in the compensation system in one embodiment. The reference frame of the earth is represented by north N, east E, and down D coordinates. The position of an aircraft, which may be provided by an altimeter and a GPS system, is in the earth reference frame. The reference frame of the body of the aircraft $\underline{\Omega^B}$ is represented by heading B1, pitch B2, and roll B3 coordinates that may be provided by the aircraft's gyros. The reference frame of the camera is represented by a line of sight C1, tilt C2, and scan C3 coordinates. In one embodiment, the camera is controlled by an inertial stabilization system that controls the gimbal motors to control the orientation of the C1, C2, and C3 camera axes. The compensation system receives camera scan and tilt rate information from the camera rate gyros and adjusts these rates to further account for the overflight velocity. The inertial stabilization system maintains the orientation of the camera to compensate for the maneuvering of the aircraft.

Applicant amends paragraph [0019] on page 5 to read:

[0019] The compensation system inputs the altitude of the target and an indication of the line of sight of the camera when pointing at the target. The compensation system initially calculates the position of the target in the reference frame of the earth ~~R^E target~~ $\underline{R^E_{target}}$ using the position of the aircraft ~~R^E aircraft~~ $\underline{R^E_{aircraft}}$. The compensation system then repeatedly adjusts the gimbal angles so that the target is in the line of sight of the camera to compensate for the overflight velocity. The compensation system calculates the velocity of the aircraft relative to the target and adjusts the gimbal angles as the aircraft moves so that the target will remain in the line of sight. This adjustment is referred to as the dynamic difference in the line of sight because it compensates for movement of the aircraft relative to the target. Because the adjustments may not perfectly compensate for the overflight

velocity, the compensation system also calculates the static difference between the actual line of sight of the camera and the line of sight needed to point to the target. The compensation system includes this static difference in the adjustment to the gimbal angles. Thus, the adjustments for dynamic differences based on velocity compensates for the overflight velocity, and the adjustments for static differences based on the line of sight of the camera compensates for variations between the intended and the actual line of sight.